UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

80548   7590   10/19/2009

FLIESLER MEYER LLP
650 CALIFORNIA STREET
14TH FLOOR
SAN FRANCISCO, CA 94108

EXAMINER
CHEN, QING

ART UNIT	PAPER NUMBER
2191	

DATE MAILED: 10/19/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,814	01/22/2004	David Bau	ORACL-01388US1	6120

TITLE OF INVENTION: MARSHALING AND UN-MARSHALING DATA TYPES IN XML AND JAVA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	01/19/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

80548	7590	10/19/2009

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,814	01/22/2004	David Bau	ORACL-01388US1	6120

TITLE OF INVENTION: MARSHALING AND UN-MARSHALING DATA TYPES IN XML AND JAVA

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nonprovisional	NO	$1510	$300	$0	$1810	01/19/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHEN, QING	2191	717-137000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.
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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 569 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 569 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/762,814	BAU, DAVID
	Examiner	Art Unit
	Qing Chen	2191

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed on July 27, 2009*.

2. ☒ The allowed claim(s) is/are *1-10,12-14,23-32,34-36,44-53,55-57,68 and 69, renumbered as 1-41*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

        a) ☐ All   b) ☐ Some*   c) ☐ None of the:

            1. ☐ Certified copies of the priority documents have been received.

            2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

            3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

1.   This Office action is in response to the amendment filed on July 27, 2009.

2.   **Claims 1-10, 12-14, 23-32, 34-36, 44-53, 55-57, 68, and 69** are pending.

3.   **Claims 1, 6, 12, 23, 26, 28, 34, 44, 55, 68, and 69** have been amended.

4.   **Claims 67-69** have been added.

5.   **Claims 11, 15-22, 33, 37-43, 54, and 58-67** have been canceled.

6.   **Claims 1-10, 12-14, 23-32, 34-36, 44-53, 55-57, 68, and 69** are allowed, renumbered as
1-41.

7.   The objection to the title is withdrawn in view of Applicant's amendments to the title.

8.   The objections to Claims 40 and 58 are withdrawn in view of Applicant's cancellation of
the claims.

9.   The 35 U.S.C. § 112, first paragraph, rejections of Claims 15-17 are withdrawn in view
of Applicant's cancellation of the claims.

10.   The 35 U.S.C. § 112, second paragraph, rejections of Claims 26, 40, and 64 are
withdrawn in view of Applicant's amendments to the claims or cancellation of the claims.

11.   The 35 U.S.C. § 101 rejections of Claims 1-22 are withdrawn in view of Applicant's
amendments to the claims.

12.   It is noted that Claims 6 and 28 contain proposed amendments. However, the claims still
bear the "Previously Presented" status identifier.

13.   It is noted that Claim 57 contains no proposed amendments. However, the claim bears the
"Currently Amended" status identifier.

Examiner's Amendment

14.   An Examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with

Kuiran (Ted) Liu (Reg. No. 60,039) on October 5, 2009.

The application has been amended as follows:

AMENDMENTS TO THE SPECIFICATION

Please amend the title as follows:

Marshaling And Un-Marshaling Data Types In ~~Xml~~ XML And JAVA®

Please amend the abstract as follows:

[0070] The use of XML types can allow the combination of XML[[-]] and JAVA® [[-]]

type systems, which overcomes many deficiencies in existing marshaling and unmarshaling

systems by translating XML schemas which define XML data in an XML document into XML

types in ~~Java~~ JAVA®. Unlike traditional attempts at translating between XML and ~~Java~~ JAVA®,

XML schemas realized as XML types can remain fully faithful to the XML, and are capable of a

number of XML data operations. In addition, the XML types can be easily transformed among

themselves and ~~Java~~ JAVA® types, and a lightweight store retaining XML information at tag

level allows incremental XML marshaling and unmarshaling.

AMENDMENTS TO THE CLAIMS

Please cancel Claim 67 and amend Claims 1, 12, 23, 34, 44, 55, 68, and 69 as follows:

1. (Currently Amended) A computer-implemented system to marshal and unmarshal data

between an extensible markup language (XML) and an object-oriented programming language,

comprising:

an XML schema which defines an XML data; and

a compiler, running on one or more processors of the computer-implemented system, to

generate an object-oriented programming language type from the XML schema, wherein the

object-oriented programming language type is automatically generated for an object-oriented

programming language component as an inner class to an XML control interface for the object-

oriented programming language component,

wherein the object-oriented programming language type corresponds to the XML schema

and provides XML-oriented data manipulation, wherein the object-oriented programming

language type extends from a base type that allows the combination of an XML type system and

an object-oriented programming language type system and can access and manipulate the XML

data from within the object-oriented programming language type system,

wherein the object-oriented programming language type executes one or more XML data

operations provided by the XML type system, on the XML data, to generate one or more result

sets in the object-oriented programming language type system, wherein each of the one or more

XML data operations is one of

> an XML data query operation;

> an XML data transformation operation; and

> an XML data iteration operation.

12. (Currently Amended) The computer-implemented system according to claim 1,

further comprising:

an XML schema capable of defining [[the]] legal types of the XML data, which include

constraints on data types and ranges of the XML data; and constraints on the data types and

ranges of the object-oriented programming language type.

23. (Currently Amended) A method to marshal and unmarshal data between an extensible

markup language (XML) and an object-oriented programming language, comprising:

defining an XML data using an XML schema;

generating, via a compiler running on one or more processors, an object-oriented

programming language type from the XML schema, wherein the object-oriented programming

language type is automatically generated for an object-oriented programming language

component as an inner class to an XML control interface for the object-oriented programming

language component, wherein the object-oriented programming language type corresponds to the

XML schema and provides XML-oriented data manipulation, wherein the object-oriented

programming language type extends from a base type that allows the combination of XML and

object-oriented programming language type systems and can access and manipulate the XML

data from within the object-oriented programming language type system; and

executing, via the object-oriented programming language type, one or more XML data

operations provided by the XML type system, on the XML data, to generate one or more result

sets in the object-oriented programming language type system, wherein each of the one or more

XML data operations is one of

an XML data query operation;

an XML data transformation operation; and

an XML data iteration operation.

34. (Currently Amended) The method according to claim 23, further comprising:

defining [[the]] legal types of the XML data via an XML schema, which include

constraints on data types and ranges of the XML data.

44. (Currently Amended) A machine readable storage medium having instructions stored

thereon that when executed by a processor cause a system to:

define an extensible markup language (XML) data using an XML schema;

generate, via a compiler running on one or more processors, an object-oriented

programming language type from the XML schema, wherein the object-oriented programming

language type is automatically generated for an object-oriented programming language

component as an inner class to an XML control interface for the object-oriented programming language component, wherein the object-oriented programming language type corresponds to the XML schema and provides XML-oriented data manipulation, wherein the object-oriented programming language type extends from a base type that allows the combination of XML and object-oriented programming language type systems and can access and manipulate the XML data from within the object-oriented programming language type system; and

execute, via the object-oriented programming language type, one or more XML data operations provided by the XML type system, on the XML data, to generate one or more result sets in the object-oriented programming language type system, wherein each of the one or more XML data operations is one of

an XML data query operation;

an XML data transformation operation; and

an XML data iteration operation.

55. (Currently Amended) The machine readable storage medium of claim 44, further comprising instructions that when executed cause the system to:

define [[the]] legal types of the XML data via an XML schema, which include constraints on data types and ranges of the XML data.

67. (Canceled)

68. (Currently Amended) The computer-implemented system according to claim 1, ~~further comprising~~ <u>wherein</u>:

~~sharing an~~ <u>the</u> object-oriented programming language type <u>is shared</u> among multiple object-oriented programming language components~~, by explicitly referring the object-oriented programming language type when an object-oriented programming language component is defined~~.

69. (Currently Amended) The <u>computer-implemented</u> system according to claim 1, wherein:

the object-oriented programming language type is both validated by one or more schema in XML type system and checked under the object-oriented programming language type system.

-- END OF AMENDMENT --

Reasons for Allowance

15.   The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component" as recited in independent Claims 1, 23, and 44.

The closest cited prior art, US 7,155,705 (hereinafter "Hershberg"), teaches techniques for binding a data exchange format, such as XML, to an application based on tags in comments of source code for the application. However, Hershberg fails to teach "wherein the object-oriented programming language type is automatically generated for an object-oriented programming language component as an inner class to an XML control interface for the object-oriented programming language component" as recited in independent Claims 1, 23, and 44.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

17.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191